I claim:

1. A drug delivery composition comprising

a polymer comprising ester or ester-anhydride bonds, wherein the polymer is formed from an unsaturated fatty acid and at least one alkane-dicarboxylic acid or alkyl hydroxyl acid, and

a biologically active agent.

- 2. The composition of claim 1, wherein the biologically active agent is selected from the group consisting of small drug molecules, peptides and proteins, DNA and DNA complexes with cationic molecules.
- 3. The composition of claim 1, wherein the composition is in a form suitable for administration by injection.
- 4. The composition of claim 1, wherein the polymer is a poly(esteranhydrides) with the formula:

where R is a linear or branched aliphatic or aromatic moiety when x+y=1 and x is not 0, or R is an unsaturated fatty acid with at least one *cis*-double bond, or an ester of ricinoleic acid.

R' is a ricinoleic acid residue,

R" is an aliphatic or aromatic moiety, and

n is an integer from 1 to 200.

- 5. The composition of claim 4, wherein R is a natural or synthetic fatty acid selected from the group consisting of: oleic acid, ricinoleic acid, and linolenic acid.
- 6. The composition of claim 1, wherein the dicarboxylic acid is selected from the group consisting of C₄ to C₂₂ linear alkane dicarboxylic acids, dimer erucic acid, dimer oleic acid and non-linear fatty acid-ester derivatives of ricinoleic acid, fumarate or succinate and mixtures thereof.

- 7. The composition of claim 1, wherein the dicarboxylic acid is a derivative of oligomers or polymers of hydroxy acids.
- 8. The composition of claim 1, wherein the polymer is prepared from purified ricinoleic acid, wherein ricinoleic acid comprises at least 90% by weight of the polymer.
- 9. The composition of claim 1, wherein the biologically active agent is encapsulated in microparticles or nanoparticles.
- 10. The composition of claim 2, wherein the biologically active agent is selected from the group consisting of the group consisting of antibacterial, anti-infammatory and anticancer agents, antidepressants, analgesics and local anesthetics.
- 11. A method for treating a patient in need of treatment comprising injecting a drug delivery composition into the patient, wherein the composition comprises

a polymer comprising ester or ester-anhydride bonds, wherein the polymer is formed from an unsaturated fatty acid and at least one alkane-dicarboxylic acid or alkyl hydroxyl acid and

a biologically active agent.

- 12. The method of claim 11 wherein the injection is administered intraperitoneally, intradermally, intramuscularly, intratumorally, into body cavities, into bone, and into internal organs.
- 13. The method of claim 11 , wherein the biologically active agent is selected from the group consisting of small drug molecules, peptides and proteins, DNA and DNA complexes with cationic molecules.
- 14. A method for making a drug delivery composition comprising mixing a biologically active agent with a polymer comprising ester or esteranhydride bonds, wherein the polymer is formed from an unsaturated fatty acid and at least one alkane-dicarboxylic acid or alkyl hydroxyl acid to form a homogenous mixture.